

REMARKS

Claims 1 through 6, as amended, still remain in this patent application. Applicant wishes to express gratitude to the Examiner for the many suggestions made for putting this application in better condition and for more clearly describing the invention. All of the suggestions kindly noted have been adopted and it is believed that with these changes and additional changes to the specification and claims the inadvertent errors have been cured.

Additionally, the drawings, with the Examiner's approval, have been amended and a proposed amendment with the changes made in red for the Examiner review is being enclosed herewith. The Examiner will note that the plume of the spray was inadvertently shown incorrectly. As is pointed out in the specification and claims this invention relates to a "convergent" spray gun and the uniqueness of these types of spray guns is that the flow discharging from the end effector is in the form of a convergent spray that then crosses over into a divergent spray. The plume in the drawings originally submitted with the application only shows the divergent portion of the spray. This may have been misleading and perhaps, has prejudiced the Examiner and accounts for the selection of the cited references. To this end applicants's attorney apologizes to the Examiner and requests that the drawings be allowed to be amended to more clearly define the plume. It is believed that this amendment does not constitute new matter. As a matter of fact U. S. Patent 5,307,992 cited in the background of the present application shows the correct plume and page--, line --, is quoted immediately below for the Examiner's perusal and convenience:

"While the end-effector of the present invention functions similarly to the end-effector shown in Patent No. 5,307,992, supra, because of the incorporation of the concentric tube assembly 16, the dry powdered nozzle 14 and convergent cap 120 is made significantly smaller than

the heretofore designs while at the same time being comparable to the volume of flow of the ingredients emitted at the discharge end of the spray gun."

Reconsideration of the rejection of claims 1 and 4 as being unpatentable under 35 U.S.C. § 102(b) as being anticipated by Black. As mentioned in the above paragraph, the present invention is directed to a convergent spray gun and the claims recite this limitation. The Black gun is not a convergent type of spray gun and could hardly be considered a miniaturized gun as it appears to require two hands to operate. Obviously, merely calling a gun miniaturized would not ipso facto distinguish over the prior art. However, reviewing the claim language and the elements comprising the spray gun, it is obviously directed toward a miniaturized version. To this end, the important hardware recited in the claims and a principal requirement for miniaturizing the gun is the fluid tip. The details of this element is recited in the claims to more positively define the invention. As noted in the specification the fluid tip fits into the air cap and together the resin and air are mixed to atomize the resin before it flows to the convergent cap 120. It is believed there is nothing disclosed or taught by Black that is similar or comparable to this limitation. While the Examiner is of the opinion that spraying tar is the equivalent of spraying with a resin, Applicants' are of a different opinion the drying characteristics, viscosities etc, are believed to be different. If the Examiner is of a different mind set, it would be appreciated that the contention be supported with references or affidavit from the Examiner.

It is earnestly submitted that the Black gun is not a convergent spray gun, it does not meet the limitations in the claims and that it is not even a miniaturized gun. On these basis it is requested that the § 102(b) be withdrawn.

All the rejections under 35 U.S.C. § 103(a) of claims 2, 3, 5, 6 and 7 were based on the

primary reference Black in combination with either Breitsprecher, Schowiak, Warren or in view of Warren. Since it is believed that the Black patent lacks in pertinency, it is respectfully submitted that the combination of this patent with the other references are likewise lacking in pertinency. All the references cited by the Examiner with respect to these rejections disclose spray guns that are the typical atomizing spray guns. For example, the Schowiak gun is based on the Binks gun that is likewise what is disclosed in applicants' application. However, this is the only similarity as it is the modification of the Binks basic gun where the inventions depart. Applicants modify the Binks gun by including an end-effector that provides a convergent spray, which is unlike the spray disclosed in these references. In other words, the combination purported by the Examiner, if can be made would only provide one atomized spray gun for the other with none capable of providing the convergent spray. As mentioned above, the present invention is limited to a convergent spray gun and the elements that are added on to the front end of the gun provide the convergent spray and a miniaturizing of heretofore known convergent spray guns.

It is logical to conclude that the teachings of these references are far removed from the teachings of the present invention and that none of the references show the fluid tip element and the relationship of the fluid tip with the air cap and the convergent cap. It is respectfully submitted that the claimed invention is not suggested by any of the references collectively or individually and that there is no motivation in any of the references that would move one to arrive at a convergent spray gun to say nothing of the fact that none even remotely suggest the combination of elements claimed in this patent application. And again, without attempting to be repetitive, it is pointed out that the combination of the fluid tip and its relationship to the air cap are significantly different from what is shown in the cited references. It is believed that all of these claims patentably distinguish over the




cited references and then the rejections should be withdrawn.

In view of the foregoing, it is believed this application is in condition for allowance and the allowance thereof is respectfully requested.

Respectively submitted,

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